

CLAIMS

I claim:

1. A method of operation for wireless transmission of data to one or more destination devices across a network that includes a plurality of access points disposed about a building, each access point having a first transmission range of maximum bandwidth and a second transmission range of signal interference, the access points being arranged in a topology wherein each access point is spaced-apart from a nearest neighboring access point by a first distance less than the first transmission range, the method comprising:

transmitting the data, by a first access point, on a first channel of a first frequency band at a first data rate, the first frequency band having a plurality of channels;

repeating the data in the first frequency band substantially at the first data rate by a series of additional access points that extend across the topology, each of the additional access points:

receiving the data in the first frequency band; and

re-transmitting the data in the first frequency band on one of the plurality of channels, wherein any pair of the access points transmitting on a same channel is separated by a distance greater than the second transmission range.

2. The method of claim 1 wherein the first frequency band is a 5GHz frequency band.

3. The method of claim 1 further comprising:

transmitting, by each access point, the data at a second frequency band.

4. The method of claim 3 further comprising:
receiving the data by a destination device at the second frequency band.
5. The method of claim 3 wherein the second frequency band is a 2.4GHz frequency band.
6. The method of claim 1 further comprising:
self-configuring the network to allocate a set of channels to the access points such that a performance criteria of the network is optimized.
7. The method of claim 6 further comprising:
adapting the network to an interference source by re-configuring the set of channels allocated to the access points.
8. The method of claim 1 wherein the destination devices comprise a television.
9. The method of claim 1 wherein the destination devices comprise a computer.
10. A method of operation for wireless transmission of data to one or more destination devices across a network, the method comprising:
installing a first access point, the first access point operating in a first frequency band at a first data rate;
locating a second access point at a distance from the first access point;
powering-on the second access point;

outputting, by the second access point, an indication of signal strength of transmissions received from the first access point; and
relocating the second access point to a new location nearer to the first access point if the indication is of a too weak signal, or farther from the first access point if the indication is of a too strong signal.

11. The method of claim 10 further comprising:

locating a third access point at a second distance from the second access point;
powering-on the third access point;
outputting, by the third access point, an second indication of signal strength of transmissions received from the second access point.

12. The method of claim 10 wherein the distance is within a maximum bandwidth transmission range of the first access point.

13. The method of claim 10 wherein the new distance is within a maximum bandwidth transmission range of the first access point.

14. The method of claim 11 wherein the second distance is within a maximum bandwidth transmission range of the second access point.

15. The method of claim 10 further comprising:

exchanging encryption information between the first and second access points.

16. The method of claim 10 wherein the exchanging of encryption information comprises:

connecting a cable between a first port of the first access point and a second port of the second access point;

signaling to the second access point to initiate exchanging of encryption information; and

storing encryption information received by the second access point in a memory of the second access point.

17. The method of claim 16 wherein the memory comprises a flash ROM.

18. A method of operation for a wireless network that includes a plurality of access points disposed about a building, each access point having a first transmission range of maximum bandwidth and a second transmission range of signal interference, the access points being arranged in a topology wherein each access point is spaced-apart from a nearest neighboring access point by a first distance less than the first transmission range, the method comprising:

receiving the data by a first access point from a source;

transmitting the data by the first access point on a first channel of a first frequency band at a data rate that exceeds 30Mbps, the first frequency band having a plurality of channels;

repeating transmission of the data across a path of the wireless network by a series of additional access points, each of the additional access points transmitting the data on one of the plurality of channels, wherein any pair of the access points transmitting on a same channel is separated by a distance greater than the second transmission range.

19. The method of claim 18 further comprising:

receiving the data by a destination device.

20. The method of claim 18 wherein the additional access points transmit the data in the first frequency band.

21. The method of claim 18 wherein the first frequency band is a 5GHz frequency band.

22. The method of claim 18 further comprising:

transmitting, by each additional access point, the data in a second frequency band; and

receiving the data in the second frequency band by one or more destination devices, each of the one or more destination devices being located nearby one of the additional access points.

23. The method of claim 3 wherein the second frequency band is a 2.4GHz frequency band.

24. The method of claim 18 further comprising:

self-configuring the network to allocate a set of channels to the access points such that a performance criteria of the network is optimized.

25. The method of claim 18 further comprising:

adapting the network to an interference source by re-configuring the set of channels allocated to the access points.

26. The method of claim 19 wherein the destination device comprises a television.

27. The method of claim 19 wherein the destination device comprises a computer.